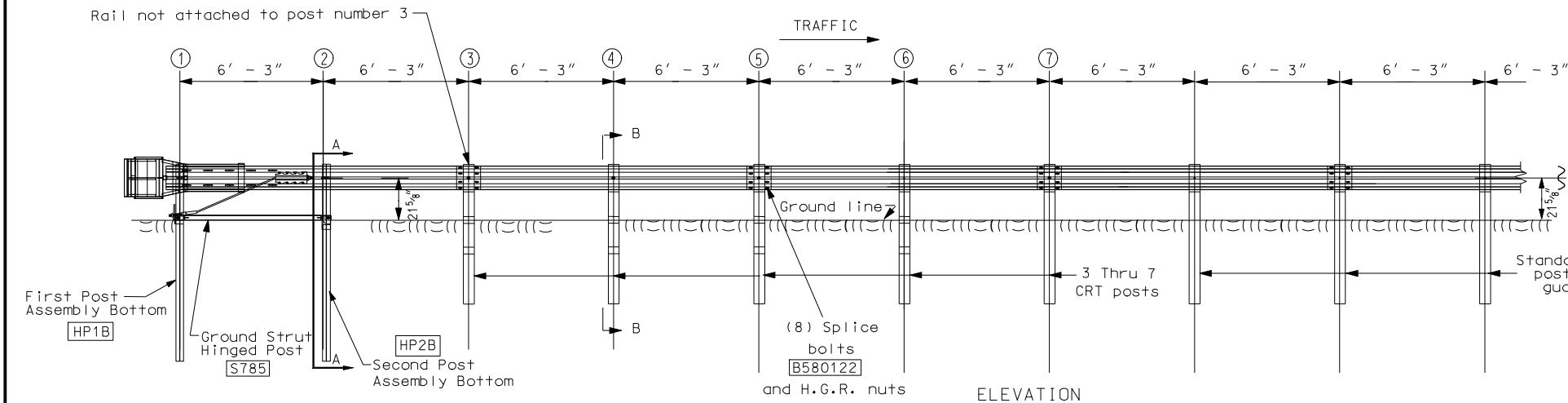
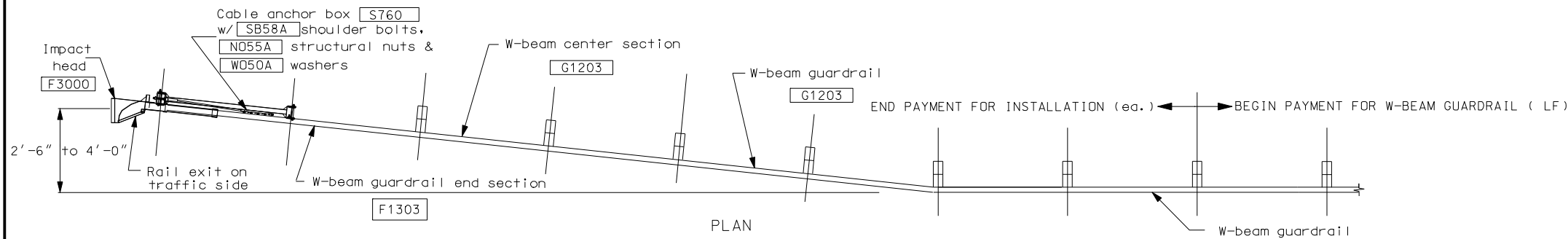


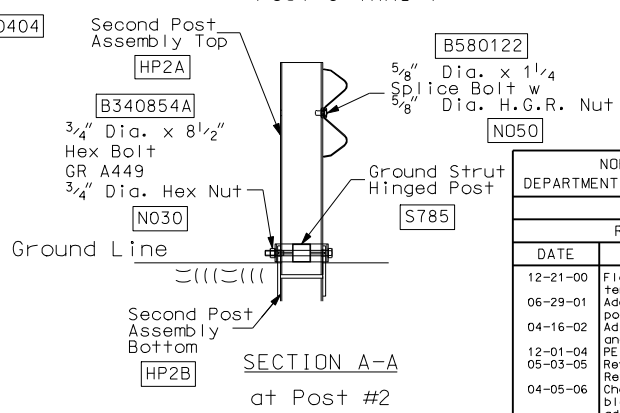
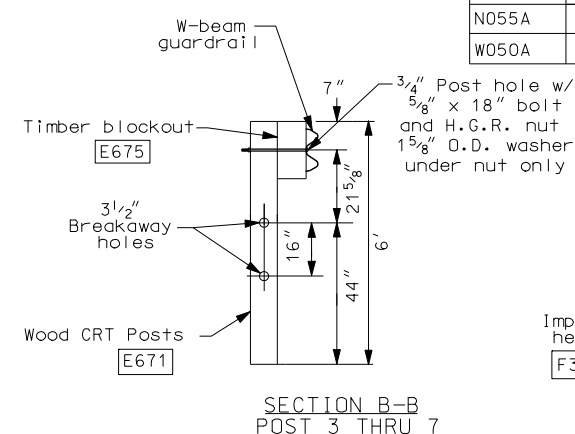
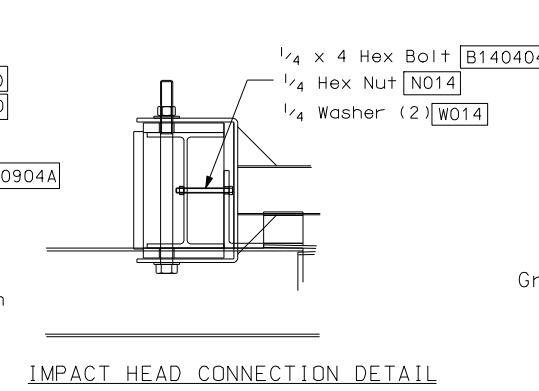
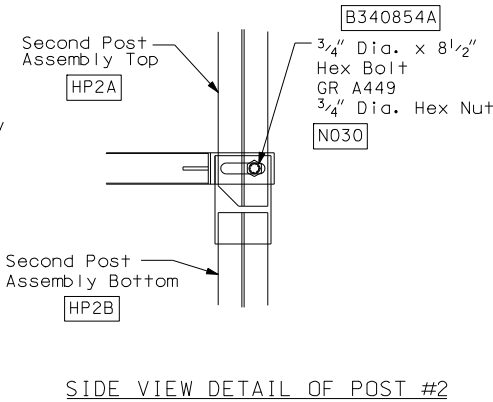
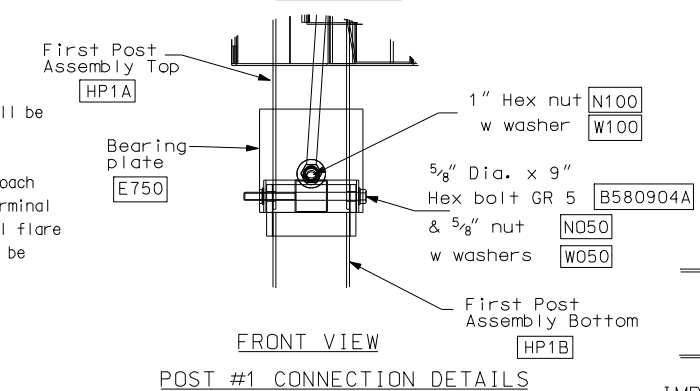
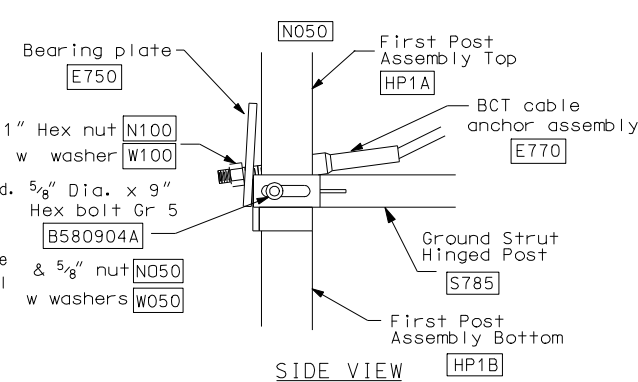
FLARED ENERGY ABSORBING TERMINAL
FOR STEEL BREAKAWAY SYSTEM

D-764-2C

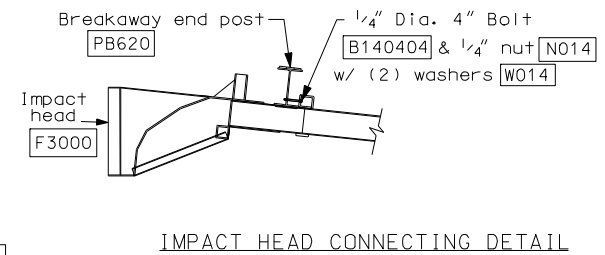


GENERAL NOTES

1. Wood posts are required with the Flared Energy Absorbing Terminal except post 1 and 2.
2. All bolts, nuts, cable assemblies, cable anchors and bearing plates shall be galvanized.
3. The lower sections of the posts shall not protrude more than 4 inches above the ground (measured along a 60 inch cord). Site grading may be necessary to meet this requirement.
4. Lower post sections shall not be driven with the upper post attached. If the post is placed in a drilled hole, the backfill material must be satisfactory compacted to prevent settlement.
5. When rock is encountered during excavation, a 12" diameter post hole 20" deep may be used if approved by the Engineer. Granular material will be placed in the bottom of the hole approximately 2 1/2" deep to provide drainage. The soil tubes shall be field cut to length, placed in the hole and back filled with adequately compacted material excavated from the hole.
6. The breakaway cable assembly shall be taut. A locking device (vice grips or channel lock pliers) should be used to prevent cable from twisting when tightening nuts.
7. The wood blockouts shall be "toe nailed" to the rectangular wood posts to prevent them from turning when wood shrinks. The nail shall be 20 penny and galvanized.
8. The Flared Energy Absorbing Terminal shall be flared only when the approach guardrail is parallel with the roadway. When the approach guardrail is flared at 16:1 to 10:1, the Flared Energy Absorbing Terminal shall have only the flare rate of the guardrail. When the guardrail flare is between 10:1 and 7:1, the Flared Energy Absorbing Terminal shall be turned parallel to the roadway.



ITEM #	QTY	BILL OF MATERIALS
F3000	1	IMPACT HEAD
F1303	1	W-BEAM GUARDRAIL END SECTION, 12 GA.
G1203	2	W-BEAM GUARDRAIL, 12 GA.
HP1A	1	FIRST POST ASSEMBLY TOP
HP1B	1	FIRST POST ASSEMBLY BOTTOM
HP2A	1	SECOND POST ASSEMBLY TOP
HP2B	1	SECOND POST ASSEMBLY BOTTOM
P671	5	WOOD CRT POST
P675	5	TIMBER BLOCKOUT OR RECYCLED EQUIV.
E750	1	BEARING PLATE
S760	1	CABLE ANCHOR BOX
E770	1	BCT CABLE ANCHOR ASSEMBLY
S785	1	GROUND STRUT HINGED POST
HARDWARE (ALL DIMENSIONS IN INCHES)		
B140404	2	1/4 Dia. x 4 HEX BOLT
W014	4	1/4 WASHER
N014	2	1/4 HEX NUT
B580122	17	5/8 Dia. x 1 1/4 SPLICE BOLT
B581802	4	5/8" Dia. x 10" H.G.R. BOLT (POSTS 3 THRU 6)
B580904A	1	5/8 Dia. x 9 HEX BOLT GR 5
W050	5	5/8 WASHER
N050	22	5/8 Dia. H.G.R. NUT
B340854A	1	3/4 Dia. x 8 1/2 HEX BOLT GR A449
N030	1	3/4 Dia. HEX NUT
N100	2	1 ANCHOR CABLE HEX NUT
W100	2	1 ANCHOR CABLE WASHER
SB58A	8	CABLE ANCHOR BOX SHOULDER BOLT
N055A	8	1/2 A325 STRUCTURAL NUT
W050A	16	1 1/16 OD x 9/16 ID A325 STR. WASHER



NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
09-01-98	
REVISIONS	
DATE	CHANGE
12-21-00	Flared energy absorbing terminal note
06-29-01	Added steel breakaway post
04-16-02	Adjusted post spacing and eliminated one post
12-01-04	PE Stamp added
05-03-05	Revised posts 1 & 2.
04-05-06	Revised notes Changed CRT post & blockout Qty. to 5 and added 7 to section B-B

This document was originally issued and sealed by MARK S. GAYDOS, Registration Number PE-4518, on 04/05/06 and the original document is stored at the North Dakota Department of Transportation